

**LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
SPECIFICATIONS**

MUFFLE FURNACE

DESCRIPTION:

This specification covers the requirements for a muffle furnace used for organic soil testing.

REQUIREMENTS:

Furnace shall be of heavy gauge metal construction and insulated with a 1.6 cu.ft capacity. Furnace shall have top vents for moisture and contaminate removal and a rear port for independent temperature measurement. Furnace shall have over temperature protection and open thermocouple protection. Furnace shall have adjustable shelf positions. Heating elements and controller must be protected by a 35A circuit breaker or larger.

Furnace Controller must be/have the following:

- Microprocessor controlled LED digital set / digital display temperature controller
- Display set point and actual temperature simultaneously in °C or °F
- Single set point with ramp and dwell
- User set over temperature protection in °C or °F

Furnace Dimensions:

- External dimensions: 21.5" W x 25.5" D x 29.5"H (± 1")
- Internal dimensions: 14" W x 14" D x 14"H (± 1")

Must be/have the following:

- Operating range of 100° to 1093°C
- Heating elements on top, bottom, and sides of chamber to ensure temperature uniformity
- Chamber temperature stability of ±1.2°C and uniformity of ±3.45°C at 1000°C
- Single door with safety switch to stop heating process when door is opened

ELECTRICAL:

- Furnace shall operate on power utilities of 240 V, 50/60 Hz, 22.9Amps, 5500W
- Furnace shall be UL or CSA approved

Must come complete with the following:

- Two (2) refractory shelves
- One (1) operator's manual and parts list

WARRANTY:

Must include a standard manufacturer warranty on parts and labor.

APPROVED BRANDS/MODELS:

Thermolyne model F30420C or equal.